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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,693	03/16/2004	Shinji Ohuchi	KKH.041D2	1770
20/987 7590 03/03/2009 VOLENTINE & WHITT PLLC ONE FREEDOM SQUARE 11951 FREEDOM DRIVE SUITE 1260 RESTON, VA 20190				
EXAMINER				
PIZARRO CRESPO, MARCOS D				
ART UNIT		PAPER NUMBER		
2814				
MAIL DATE		DELIVERY MODE		
03/03/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/800,693

**Applicant(s)**

OHUCHI, SHINJI

**Examiner**

Marcos D. Pizarro

**Art Unit**

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12, 15-17, 20-22, 25-27, 30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12, 15-17, 20-22, 25-27, 30, 31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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Attorney's Docket Number: KKH.041D2

Filing Date: 3/16/2004

Claimed Priority Dates: 6/12/2001 (Divisional of 09/878,375)  
2/4/2000 (Divisional of 09/497,684)  
2/8/1999 (JP 11-029479)

Applicant(s): Ohuchi

Examiner: Marcos D. Pizarro

### **DETAILED ACTION**

This Office action responds to the request for reconsideration filed on 12/30/2008.

#### ***Acknowledgment***

1. The request for reconsideration filed on 12/8/2008, responding to the Office action mailed on 9/4/2008, has been entered. The present Office action is made with all arguments and previously suggested amendments being fully considered. Accordingly, pending in this Office action are claims 12, 15-17, 20-22, 25-27, 30 and 31.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 12, 15-17, 20-22, 25-27, 30, and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

4. Lines 14 and 20-23 of claim 12, lines 14 and 22-24 of claim 17, lines 16 and 24-26 of claim 22, and lines 14 and 20-22 of claim 27, recite that a protective layer made of a polyimide resin is a UV-sensitive tape comprised of a hardened synthetic resin that bonds the UV-sensitive tape to the second surface of the semiconductor element.

5. The specification describes that the protective tape may be a polyimide resin, be bonded to the second surface of the semiconductor element, and be removed from the second surface through UV irradiation (see, *e.g.*, pars.0021,0025,0033). However, the description in the original disclosure fails to support the limitations recited in the claims of a protective layer that is made of a polyimide resin and which is a UV-sensitive tape comprising a hardened synthetic resin that bonds the UV-sensitive tape to the second surface of the semiconductor element.

#### **Remarks**

6. Elenius (US6441487; see, *e.g.*, fig. 2) shows most limitations in the claims including a semiconductor device comprising a protective layer **34** formed on the second surface of a semiconductor element, wherein the protective layer comprises a hardened synthetic resin (see, *e.g.*, col.8/II.29). The limitation in claims 12, 17, 22, and 27 of a protective layer that is made of a polyimide resin and is a UV sensitive tape comprising a hardened synthetic resin bonding the UV sensitive tape to the semiconductor element are not disclosed by the prior art of record. However, said limitations fail to satisfy the written description requirement under 35 U.S.C. 112, first paragraph, as set forth above in paragraphs 2-5 and below in paragraphs 7-11. Claims 12, 15-17, 20-22, 25-27, 30, and 31 would be allowable if the applicants overcome the

rejection under 112, first paragraph by showing there is sufficient written description to inform the skilled artisan that the applicants were in possession of the claimed invention as a whole at the time the application was filed. See MPEP § 2163 for guidelines pertaining the written description requirement.

### ***Response to Arguments***

7. The applicant argues:

8. The present application sets forth in par. 0021 that the protective tape 22 is a hardened synthetic resin achieving a bonding function, such as a polyimide. As further described in par. 0034, the tape is peeled from the rear surface of the wafer through UV irradiation. Accordingly, the protective tape is indeed described in the specification as a hardened synthetic resin achieving a bonding function, such as a polyimide resin, wherein the tape is peeled from the rear surface through UV irradiation. The present application thus clearly supports a protective layer of a polyimide resin that is a UV sensitive tape comprised of a hardened synthetic resin. Accordingly, the specification complies with the written description requirement, and the claims are in compliance with 35 U.S.C. 112, first paragraph.

9. The examiner responds:

10. The examiner agrees with the applicant that the specification supports a protective tape, wherein the tape is a hardened synthetic resin such as a polyimide resin (see, e.g., par. 0021). The specification also supports a protective tape that could be peeled away from the back surface of the chip by UV irradiation (see, e.g., par. 0034). However, the fact that the tape could be removed using UV irradiation does not mean that the tape itself is UV sensitive. The specification only describes that the tape is removed using UV irradiation, not that the tape *per se* is in any way sensitive to UV irradiation. No further details on removing the tape or on the radiation sensitivity of the tape are provided in the specification. There is no description in the specification of either a tape that is sensitive to UV irradiation, or a polyimide resin bonding a UV sensitive tape to a semiconductor element, or a hardened synthetic resin bonding a UV

sensitive tape to a semiconductor element, or a UV sensitive tape comprising a hardened synthetic resin, or a polyimide resin that is sensitive to UV irradiation. None of these limitations are described in the written disclosure of the application.

11. Paragraphs 0021 and 0034 mentioned by the applicant only describe that the protective tape could be a hardened synthetic layer, such as a polyimide resin, and that said tape could be removed through UV irradiation. There is no support in said paragraphs of a polyimide resin that is a UV sensitive tape, as argued by the applicant.

12. Since the originally filed specification fails to describe either a UV-sensitive tape, or a polyimide resin bonding a UV-sensitive tape to the second surface of the semiconductor element, or a polyimide resin that is a UV sensitive tape, said limitations raise 112, first paragraph issues in the claims. Accordingly, the rejection of claims 12, 15-17, 20-22, 25-27, 30, and 31 under 112, first paragraph, is proper.

### ***Conclusion***

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

14. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Papers related to this application may be submitted directly to Art Unit 2814 by facsimile transmission. Papers should be faxed to Art Unit 2814 via the Art Unit 2814 Fax Center. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2814 Fax Center number is **(571) 273-8300**. The Art Unit 2814 Fax Center is to be used only for papers related to Art Unit 2814 applications.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Marcos D. Pizarro** at **(571) 272-1716** and between the hours of 10:00 AM to 8:30 PM (Eastern Standard Time) Monday through Thursday or by e-mail via [Marcos.Pizarro@uspto.gov](mailto:Marcos.Pizarro@uspto.gov). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy, can be reached on (571) 272-1705.

17. Any inquiry of a general nature or relating to the status of this application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the

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automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

18. The following list is the Examiner's field of search for the present Office Action:

Field of Search	Date
U.S. Class / Subclass(es): 257/678-796	2/18/2009
Other Documentation:	
Electronic Database(s): EAST (USPAT, EPO, JPO)	2/18/2009

/Marcos D. Pizarro/

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